



Maker/Tinker Challenge: Make plastic from milk!



This year we challenge you to try this simple activity in making plastic from milk! You only need a few household ingredients to do this and it can be made in 30-90 minutes.

Check out this easy to follow tutorial:

<https://www.steampoweredfamily.com/activities/make-plastic-from-milk/>



THE CHALLENGE: Follow the steps in the tutorial to make your plastic material. Now it is up to you to create an item with your plastic. You can also use additional or recycled materials to add function to your plastic object. Be sure to check out the [Maker/Tinker Evaluation Rubric](#) to see what other considerations you might add to your project. Then show off the item you made and it's use at your regional/State Day!

Note: Members may still choose to enter a maker/tinker project that does not use this challenge as the basis for their exhibit. This is an option that youth may participate in if it inspires them.

What exactly is making/tinkering?

Making and tinkering are terms that are often used inter-changeably. To make or tinker is to experiment with phenomena, tools, and materials. It is thinking with your hands and learning through doing. It requires slowing down and getting curious about the mechanics and mysteries of the everyday stuff around you. It is whimsical, enjoyable, challenging, frustrating at times, and ultimately about inquiry. Tinkering is also about making something, but that something might reveal itself as you go. When you tinker, you are not following a step-by-step set of directions that leads to a tidy end result. Instead, you are questioning your assumptions about the way something works and investigating it on your own terms. The end result may create something new or solve a problem or be artistic in nature that stirs an emotional response.